

16 CUMULATIVE EFFECTS

Introduction

- 16.1 Cumulative effects considered within this assessment are those that arise as a result of additive impacts from more than one project (under construction or reasonably foreseeable projects), combining together to have an effect on a receptor that may be larger than if the effect were considered separately. Broadly, reasonably foreseeable projects are those that are known to the planning system or are already consented (but not yet built).
- 16.2 This chapter provides an assessment of cumulative effects arising from the proposed JFH in combination with the enabling schemes and other reasonably foreseeable projects in the local area.

Legislative context

- 16.3 The requirement for Cumulative Effects Assessment (CEA) is set out in Part 1 (4) of Schedule 2 of the Planning and Building (Environmental Impact) (Jersey) Order 2006, which states that assessment should assess “*the direct effects and any indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects of the development*”.

Assessment Methodology

Relevant guidance

- 16.4 There is currently no standard methodology for CEA in Jersey. However, there are some useful sources of guidance available in the UK which can be applied to assist consideration of CEA. Advice Note 17: Cumulative effects assessment relevant to nationally significant infrastructure projects (Planning Inspectorate, 2015).
- 16.5 Planning Inspectorate Advice Note 17 (Planning Inspectorate, 2015) provides a systematic approach to cumulative effects assessment which can be split into four distinct phases explained, and adapted for the Jersey context, in Table 16.1. The guidance notes that the recommended process focusses on cumulative effects with ‘other developments’. It should not be confused with the assessment of interrelationships between topics, which are assessed within the individual specialist topic chapters.

Table 16.1 Stages of Cumulative Effects Assessment

CEA Stage	Key Activities
Stage 1: Establish JFH's Zone of Influence (ZOI) and identify long list of 'other developments'	<ul style="list-style-type: none"> Identify the ZOI for each of the environmental topics covered by the EIS; Identify a long list of other developments in the vicinity of the JFH which may have cumulative effects; Undertake desktop review of available environmental information for identified cumulative developments.
Stage 2: Identify short list of 'other developments'.	<ul style="list-style-type: none"> Identify which of the identified other developments from Stage 1 has the potential to give rise to significant cumulative effects by virtue of overlaps in temporal scope, due to the scale and nature of the 'other development'/receiving environment; or any other relevant factors.
Stage 3: Information gathering	<ul style="list-style-type: none"> Information related to the shortlisted cumulative developments is gathered and reviewed.
Stage 4: Assessment	<ul style="list-style-type: none"> CEA of shortlisted cumulative development is undertaken. Each individual 'other development' is reviewed in turn to identify whether there is potential for significant cumulative effects; Mitigation measures are identified.

Zone of Influence

16.6 The Zone of Influence (ZOI) refers to the spatial area over which an effect from a project is likely to be experienced. The ZOI for the proposed JFH varies for each environmental topic and these are set out in Table 16.2 below along with the identification of what type of impact is likely.

Table 16.2: Zone of Influence, potential impacts and receptors for EIS environmental topics


Environmental topic	Zone of Influence for assessments	Potential impact (construction and operation)	Receptor/ resource
Air quality	Within 350m of site boundary	Reduction in air quality from: <ul style="list-style-type: none"> dust emissions during construction; exhaust emissions from vehicles during construction and operation; emissions from hospital plant. 	People living and working within the study area distance (i.e. 350m).
Noise	Within 600m of construction works	The increase in noise from construction and/or operation.	Residential and commercial facilities within the assessment area.
Traffic	St Helier	Increased traffic and congestion.	Road users, pedestrians.
Biodiversity	Footprint of construction works and immediately adjoining land	Disturbance, fragmentation, loss, wildlife casualties, creation of barriers to movement, lighting.	Protected species, habitats, ecologically designated sites.
Geology, hydrogeology and contamination	Within 300m of site boundary	Groundwater, human health.	Groundwater quality and flow, human health of people living and working within the study area distance.
Water Resources	500m	Generation of silt and oil laden runoff which may contaminate water resources. Changes to flood risk as a result of the construction activities and new scheme.	Surface water, groundwater, structures, assets and people within any flood risk zones.
Heritage	Redline boundary and a study area of up to 250m surrounding the site	Change in setting of cultural heritage. Loss of heritage assets.	Setting of heritage resource. Visitors to/users of the heritage asset.
Waste	Area of waste management: Island wide	Waste generated from construction/operation.	Waste disposal resources.
Wind	Site and immediate surrounding streets and pedestrian areas	Generation of uncomfortable or unsafe wind conditions.	Pedestrians, cyclists and vehicles.

Environmental topic	Zone of Influence for assessments	Potential impact (construction and operation)	Receptor/ resource
Socio-economics	St Helier focus but consideration is Jersey wide	Potential benefit of construction spend, displacement of construction workers, demands on accommodation and other businesses and amenity effects.	People Employers / employees Businesses
Townscape and Visual Impact	1.5km core study area in TVIA.	Change to the character of St Helier's townscape and to visual amenity.	Urban Character areas (UCAs) including designated features. People's views.

Establishing the long list of 'other developments'

16.7 The Planning Inspectorate guidance recommends that a wide range of future projects is included within the CEA which can be tiered (from Tier 1 – 3) according to how far advanced the development is within the planning system and to the level of detail that is likely to be available for each tier. These are set out in Table 16.3, adapted to the Jersey context.

Table 16.3 Project tiering for the purpose of CEA

Tier 1	<ul style="list-style-type: none"> • Projects under construction; • Permitted application(s) but not yet implemented; • Submitted application(s) but not yet determined; 	<p>Decreasing level of detail likely to be available.</p> 
Tier 2	<ul style="list-style-type: none"> • Projects on SoJ's Programme of Projects where a scoping report has been submitted; 	
Tier 3	<ul style="list-style-type: none"> • Projects on SoJ's Programme of Projects where a scoping report has not been submitted; • Identified in the Revised 2011 Island Plan recognising that much information on any relevant proposals may be limited; and • Identified in other plans and programmes (as appropriate) which set the framework for future development consents/approvals, where such development is reasonably likely to come forward. 	

16.8 The less information that is available for the future projects (i.e. environmental impacts predicted, project definition), the less likely that the CEA will be able to make any robust assessment in relation to these projects.

16.9 Whilst projects that are Tier 2 and Tier 3, as defined by the Planning Inspectorate guidance are referenced within this assessment, it is considered that there is limited value in including schemes for which there is no environmental assessment information available as it will not be possible to assess environmental effects.

Assessment criteria

16.10 The CEA does not aim to assign significance levels to any of the cumulative effects identified. Rather, a judgement has been made on whether the cumulative effects are likely to be more or less significant than the effects identified for the proposed JFH alone.

Consultation

16.11 The list of projects considered within the CEA (see Table 16.5) has been obtained through consultation with SOJ Planning Department and through desktop research. Environmental information relating to each of the developments identified has been obtained from the SoJ planning register and from publicly available reports.

Limitations and assumptions

16.12 Assessment of cumulative effects is limited by the level of information that is available for each of the topic assessments. When consideration is given to effects that may arise as a result of impacts from other developments, the assessment becomes limited by the amount of information that is made publicly available.

Identification of Cumulative Developments

- 16.13 Developments relevant to the CEA have been identified through desktop research and in consultation with SoJ. They represent developments within approximately 1,000m from the proposed JFH site in addition to the enabling schemes for the development as defined in Section 3 of this EIS. Only three of the nine enabling schemes will require planning permission; usually, within CEA only projects for which planning permission is needed are considered. This is because environmental information for these projects is not otherwise available and/or the nature of the proposals means that levels of environmental effect would likely be very small. For the purpose of this CEA however, consideration has been given to all enabling schemes. This is for completeness of assessment, to cover all components required for the proposed JFH.
- 16.14 Not all of the identified cumulative projects are considered to have the potential to add any cumulative effects to the environmental impacts identified for the proposed JFH. This is based either on their spatial separation or because the temporal scope of the developments does not align (i.e. the impacts will occur at different times and will therefore not be cumulative). Some projects identified during consultation with SoJ have already been constructed and therefore are not considered further in the CEA as they have already been accounted for within the baseline of each of the assessments.
- 16.15 Table 16.4 and Table 16.5 lists the enabling schemes and other developments respectively, and identifies which of these have the potential to have cumulative effects with the proposed JFH. Where it has been identified that cumulative impacts may arise, a more detailed assessment has been undertaken for the relevant environmental topics and mitigation measures identified. This assessment is set out below Tables 16.4 and 16.5.
- 16.16 It should be noted that traffic associated with the cumulative developments is included in the traffic modelling only for years when the developments are proposed to be operational, i.e. where they are not yet constructed, they will not be included within the modelled baseline year (2016). For future baseline, i.e. 2025, these developments are included within the traffic model and are therefore already considered within the transport assessment. Effects related to traffic are therefore not considered further within the CEA.
- 16.17 Air quality and noise assessments of operational effects are based on traffic data, which includes the developments listed in Tables 16.4 and 16.5. Therefore, any cumulative operational effects are inherent within the results outlined in the air quality and noise chapters of this report. No further cumulative effects would be anticipated, therefore operational air quality and noise effects are not considered further. Cumulative effects related to construction are considered as these are not inherent within the topic chapter assessments.

Table 16.4 Future Hospital Enabling Schemes

Development	Planning Reference	Status	Development classification	Distance from JFH	Tier	Within ZOI?	Potential for CEA?	Justification for potential cumulative effects
ES01	N/A	Pre-planning	Internal fit out of commercial property	approx. 4.5km away	3	Transport/ Heritage/ Waste/ Socioeconomic/ TVIA	Yes	ES01 involves the relocation of catering facilities to an off-site location with suitable access and services to produce hospital meals. The new location is an existing commercial property on St Peter's Technical Park, which would require an internal re-fit to include external alterations and revised access.
ES02	N/A	No planning permission required	Internal reorganisation	N/A	N/A	Noise/ Heritage/ Waste/ Socioeconomic/ TVIA	No	ES02 involves the relocation of engineering functions to release the site for JFH (Phase A Buildings). No cumulative effects likely.

Development	Planning Reference	Status	Development classification	Distance from JFH	Tier	Within ZOI?	Potential for CEA?	Justification for potential cumulative effects
ES06	N/A	No planning approval needed for office accommodation. Permission possibly required to change the use of existing floorspace to educational use.	Educational	Unknown – likely within 5 minute walk	N/A	Socioeconomic/ TVIA	No	This proposal includes the relocation of training, education and office administration staff from Peter Crill House (to allow for demolition) to an off-site location (currently undefined). No construction is required and no additional traffic will be induced therefore no cumulative effects likely.
ES09	N/A	No planning approval needed	Healthcare	On-site	N/A	Air quality/ Noise/ Heritage/ Waste/ Socioeconomic	No	Ongoing maintenance of services within the retained operational hospital.

Development	Planning Reference	Status	Development classification	Distance from JFH	Tier	Within ZOI?	Potential for CEA?	Justification for potential cumulative effects
ES10	N/A	Most likely no planning approval needed	Residential	1.2km/ unknown	3	Socioeconomic	No	<p>These proposals include the relocation of staff accommodation that is currently in Westaway Court and Peter Crill House; to The Limes (a former care home) and other private sector accommodation. The socioeconomic effect from this has been covered within Chapter 14: Socioeconomics and therefore does not need to be included in the CEA.</p> <p>No townscape or visual cumulative effects predicted.</p>

Table 16.5 Identified developments with potential for cumulative effects

Development	Planning Reference	Status	Development classification	Approx. Distance from Jersey Future Hospital	Tier	Within ZOI?	Potential for CEA	Justification for potential cumulative effects
Jersey International Finance Centre - Building 1	P/2013/0993	Approved (28/01/14)	Commercial - office	150m	1	Air quality/ Noise/ Biodiversity/ Geology/ Heritage/ Waste/ Socio- economics/ TVIA	Yes	<p>The proposals are for an office development of six storeys located on the Esplanade.</p> <p>Construction waste would be generated.</p> <p>The transport assessment already includes consideration of this development, therefore transport effects are not considered further.</p>
Jersey International Finance Centre – Buildings 2, 3 and 6	N/A	Pre-planning	Commercial - office	150m	3	Air quality/ Noise/ Biodiversity/ Heritage/ Waste/ Socio- economics/ TVIA	Yes	<p>The proposals for these developments have not yet been submitted to planning. However, they have been identified within the Phase 1 Masterplan for which an EIA was prepared in January 2013. The programme within the Masterplan identified a 10 year construction phase from 2013.</p>

Development	Planning Reference	Status	Development classification	Approx. Distance from Jersey Future Hospital	Tier	Within ZOI?	Potential for CEA	Justification for potential cumulative effects
Jersey International Finance Centre – Building 4	P/2012/1141	Constructed – not yet occupied	Commercial	250m	N/A	Air quality/ Noise/ Heritage/ Waste/ Socio-economics/ TVIA	No	Building 4 is already constructed and therefore has been included within the baseline of the assessments relating to construction of Jersey Future Hospital. The transport assessment already includes consideration of this development, therefore transport effects are not considered further.
Jersey International Finance Centre - Building 5	P/2014/2192	Approved (23/07/15)	Commercial - office	250m	1	Air quality/ Noise/ Heritage/ Waste/ Socio-economics/ TVIA	Yes	Proposals are for the construction of a multi-storey office building with associated basement parking and public realm with temporary relocation of existing public parking. Construction waste would be generated. The transport assessment already includes consideration of this development, therefore transport effects are not considered further within the CEA.

Development	Planning Reference	Status	Development classification	Approx. Distance from Jersey Future Hospital	Tier	Within ZOI?	Potential for CEA	Justification for potential cumulative effects
Public car park JIFC	P/2013/1209	Approved (16/01/14)	Commercial – car park	250m	1	Air quality/ Noise/ Heritage/ Waste/ Socio- economics/ TVIA	No	<p>Proposal for the construction of a 520 space underground public car park on three and a half levels with new public park on the surface.</p> <p>Construction waste would be generated.</p> <p>The transport assessment already includes consideration of this development, therefore transport effects are not considered further within the CEA.</p>
J1 Esplanade	P/2011//0817 & RC/2016/1027	Approved (16/12/11) (10/11/16)	Commercial – office and retail	400m	1	Noise/ Waste/ Socio- economics/ TVIA	Yes	<p>J1 Esplanade is a significant commercial development. An EIS was submitted in 2011 which had the permission extended in 2016.</p> <p>Construction waste would be generated.</p> <p>The transport assessment already includes consideration of this development, therefore transport effects are not considered further within the CEA.</p>
35 Commercial Street	P/2016/1216	In planning (pending) (1/09/16)	Commercial – office and car park	350m	1	Air quality/ Noise/ Waste/ Socio- economics/ TVIA	Yes	<p>35 Commercial Street is a large commercial development. No EIS was submitted with the application but a review has been made of the site waste management plan and heritage assessment to identified potential effects.</p> <p>The transport assessment already includes consideration of this development, therefore transport effects are not considered further within the CEA.</p>

Development	Planning Reference	Status	Development classification	Approx. Distance from Jersey Future Hospital	Tier	Within ZOI?	Potential for CEA	Justification for potential cumulative effects
27 Esplanade & 3 La Rue Des Mielles	P/2011/0647	Approved (04/04/14)	Commercial - office	250m	1	Air quality/ Noise/ Heritage/ Waste/ Socio- economics/ TVIA	Yes	<p>Construction of a new seven storey office building behind the refurbished historic façade to 27 Esplanade.</p> <p>Construction waste would be generated.</p> <p>A review has been made of the heritage elements of this development.</p> <p>The transport assessment already includes consideration of this development, therefore transport effects are not considered further within the CEA.</p>
22/23 Esplanade	P/2012/1344	Approved (04/03/13)	Commercial - office	300m	1	Air quality/ Noise/ Waste/ Socio- economics/ TVIA	Yes	<p>Construction of 6 storey office building to include basement parking. Retaining and refurbishment of façade at 38 Commercial Street.</p> <p>Construction waste would be generated.</p> <p>A review has been made of the heritage element of this development.</p> <p>The transport assessment already includes consideration of this development, therefore transport effects are not considered further within the CEA.</p>

Development	Planning Reference	Status	Development classification	Approx. Distance from Jersey Future Hospital	Tier	Within ZOI?	Potential for CEA	Justification for potential cumulative effects
Zephyrus	P/2009/1462 followed by: RC/2014/2002	Approved (19/02/10) (19/02/15)	Mixed use	350m	1	Air quality/ Noise/ Waste/ Socio- economics/ TVIA	Yes	59 Residential apartments in five buildings with ground floor commercial space and associated basement parking and storage. Construction waste would be generated.
Westwater	P/2006/1989 followed by: RC2014/2001	Approved (18/10/14) (23/04/15)	Residential	400m	1	Noise/ Waste/ Socio- economics/ TVIA	Yes	Proposals for 6 floors of residential accommodation with basement car park. Construction waste would be generated.
Castle Quays 2	RP/2011/1101 followed by RC/2015/1335	Approved (26/11/11) (15/11/15)	Mixed use	350m	1	Air quality/ Noise/ Waste/ Socio- economics/ TVIA	Yes	A new development of three blocks, to include office space (500m ²), retail (1,000m ²), café and restaurant (300m ²) and 280 apartments (1 and 2 bedroom). Two levels of underground car parking to provide spaces for 204 cars and 17 motorcycles. Construction waste would be generated.

Development	Planning Reference	Status	Development classification	Approx. Distance from Jersey Future Hospital	Tier	Within ZOI?	Potential for CEA	Justification for potential cumulative effects
Metals recycling facility, La Collette	P/2017/0580	In planning (02/05/17)	Metal recycling facility	2km	1	Waste/ Socio-economics/ TVIA	No	Application for a new metals recycling facility. The site will store and process metals, batteries, cars, and electrical equipment. An EIS was submitted with the planning application which identifies only very localised impacts. These are not likely to interact with the impacts from the Future Hospital.
Sunnyside gardens	P/2017/0414	In planning (31/03/17)	Mixed use	2km	1	Waste/ Socio-economics	No	This development includes proposals for 37 residential apartments, 3 houses, and 4 commercial units (350m ²) with associated underground parking for 58 cars and above ground parking for 10 cars. Due to the distance from the JFH site and the relatively small scale of development, it is not considered that there would be any cumulative effects.
Bellozanne Sewage Treatment Works	P/2017/0309	In planning (14/03/17)	Sewage treatment works	2km	1	Water resources/ Waste/ Socio-economics	Yes	This application is for the development of 9 settlements tanks, sludge plant, 2 sludge storage tanks, administration building, UV plant and other associated waste treatment facilities. An EIS was submitted with the application. Due to the distance of this development from the JFH site, it is considered that the effects would not be cumulative for all topics except water resources which would benefit from the increased capacity within the new treatment works.
Jersey Gas Co Site	PP/2016/1414	Approved (27/03/17) in appeal	Residential	1km	1	Waste/ Socio-economics/ TVIA	Yes	This application is for the demolition of the existing gas works and associated office, showroom and staff accommodation followed by the construction of new residential developments and two commercial premises. Due to the size of the development and the potential for construction to align with the JFH construction programme, cumulative effects may arise.

Development	Planning Reference	Status	Development classification	Approx. Distance from Jersey Future Hospital	Tier	Within ZOI?	Potential for CEA	Justification for potential cumulative effects
Summerland Factory, Broadcasting House and Thorpe House	RP/2017/1086 - update of outline PP/2012/0832	Approved (13/03/16)	Residential	300m	1	Geology/ Waste/ Socio- economics/ TVIA	Yes	A development based on a SPG Summerland and Ambulance HQ sites Rouge Bouillion, St Helier (May 2012). The proposal includes for the development of 86 residential units (7 houses and 79 apartments), and a basement car park for 69 cars. Due to the potential for construction periods to align, cumulative effects may arise.
La Collette Flats	PP/2015/0747	Approved (13/01/16) in appeal	Residential	1.5km	1	Waste/ Socio- economics	No	These outline proposals are for the demolition of five existing blocks containing 59 units and construction of five larger blocks containing 147 units. Due to the potential for construction periods to align, cumulative effects may arise.
Westmount Quarry	P/2012/1654 RP/2016/0538	Approved (30/08/13) (09/06/16)	Residential	800m	1	Waste/ Socio- economics/ TVIA	Yes	These proposals are for the redevelopment of former parish depot and disused quarry to provide 242 residential apartments, ground floor studio and gym, basement and ground level parking for 256 vehicles with associated plant and refuse areas. Due to size of development and proximity to the JFH, cumulative effects may arise. No environmental information available.

Development	Planning Reference	Status	Development classification	Approx. Distance from Jersey Future Hospital	Tier	Within ZOI?	Potential for CEA	Justification for potential cumulative effects
BOA site	PP/2015/1538	Approved 12/09/16	Residential	1.3km	1	Waste/ Socio-economics/ TVIA	Yes	Outline proposals are for the redevelopment of a warehouse, office and commercial units to build 174 dwellings, 4 commercial units, community facility, and car parking spaces for 191 cars. Due to the potential for construction periods to align, cumulative effects may arise.
Ann Street Brewery	PP/2016/1882	In planning (03/01/17)	Mixed use	1.1km	1	Waste/ Socio-economics/ TVIA	Yes	Outline proposal is for the redevelopment of the brewery to mixed use (large retail store and associated parking, residential, office space and a café. The development has not yet been approved, but there is the potential for construction periods to align and therefore cumulative effects may occur.
Premier Inn Hotel	P/2014/1497 followed by RP/2015/1264	Approved (18/12/14) (07/12/15)	Hotel	400m	1	Noise/ Waste/ Socio-economics/ TVIA	Yes	Proposal for the construction of a five storey building comprising of retail, hotel reception, cafe, office and service area on ground floor with 91 No. bed hotel with restaurant facilities, office and residential above.
5-6 Esplanade	P/2013/1144	Approved (18/12/13)	Commercial - Office	700m	1	Noise/ Waste/ Socio-economics/ TVIA	Yes	Proposal for the demolition of the existing building and construction of an office comprising 4,308 sqm on the Esplanade. Due to the potential for construction periods to align, cumulative effects may arise. Due to the potential for construction periods to align, cumulative effects may arise.

Development	Planning Reference	Status	Development classification	Approx. Distance from Jersey Future Hospital	Tier	Within ZOI?	Potential for CEA	Justification for potential cumulative effects
9 Castle Street	P/2017/1369	Pending	Commercial - office	450m	1	Noise/ Waste/ Socio-economics/ TVIA	Yes	Proposal for the demolition of existing building and construction of a 5 storey office comprising 1,148 sqm. Due to the potential for construction periods to align, cumulative effects may arise.
UBS, 24 Union Street	P/2017/1004	Approved	Residential	450m	1	Noise/ Waste/ Socio-economics	Yes	Change of use from office to residential to create 25 No.one bed and 2 No. two bed apartments. Due to the potential for construction periods to align, cumulative effects may arise.
72, 74, 76 Great Union Road	P/2017/0927	Pending	Residential	350m	1	Noise/ Waste/ Socio-economics	Yes	The proposals are for the demolition of existing buildings and the construction of 13 residential apartments (5 No. one bed and 8 No. two bed). Due to the potential for construction periods to align, cumulative effects may arise.

Assessment of Cumulative Effects

16.18 Based on the outputs from Tables 16.4 and 16.5, cumulative effects are discussed for each environmental topic below, where relevant, in relation to the relevant Cumulative Developments.

Enabling Schemes – Cumulative Effects

16.19 Out of the seven Enabling Schemes, two have been identified as having potential to have cumulative effects with the proposed JFH. These include:

- ES01: Relocation of JGH catering services off site to an existing light industrial unit (St Peter Technical Park);
- ES08: Relocation of hospital services to Granite Block, JGH 1960's and 1980's block.

Air

16.20 The air quality assessment of the proposed JFH has included consideration of all Enabling Schemes, therefore no further assessment is needed. Appropriate levels of dust mitigation during the demolition/construction phase should be applied to each Enabling Scheme.

Heritage

16.21 Relocation of services to the Granite Block for ES08 will only require internal modifications and therefore would not affect the heritage asset as the internal features are not part of the listing.

Waste

16.22 Waste would be generated during the construction phases of each of these enabling projects. Due to the methodology used for the calculation of waste, these have been included alongside the Cumulative Developments from Table 16.5 below.

Socio-economic

16.23 The Enabling Schemes identified will be delivered in advance of the works at the main hospital site and therefore will not give rise to any cumulative effects in relation to amenity and or demand on construction related businesses and suppliers. In addition, it is currently planned that the majority of construction workers for the enabling works will be sourced from local, on-island contractors whilst the main hospital is likely to have large proportions of off-island workers. Therefore, should the enabling projects and main site co-inside from a programme perspective, these projects will not bring cumulative

socio-economic effects in relation to workforce demand and potential displacement effects.

Cumulative Developments – Cumulative Effects

16.24 From the long list of potential ‘cumulative developments’ a shorter list has been identified from Table 16.5 which are the other developments that may give rise to significant cumulative effects by virtue of overlaps in temporal scope, due to the scale and nature of the ‘other development’/receiving environment, or any other relevant factors.

16.25 For ease of reference, ‘other developments’ that are considered to have potential cumulative effects include:

- Jersey International Finance Centre - Building 1 (P/2013/0993)
- Jersey International Finance Centre – Buildings 2, 3 and 6 (pre-planning)
- Jersey International Finance Centre - Building 5 (P/2014/2192)
- J1 Esplanade (P/2011//0817 & RC/2016/1027)
- 35 Commercial Street (P/2016/1216)
- 27 Esplanade (P/2011/0647)
- 22/23 Esplanade (P/2012/1344)
- Zephyrus (P/2009/1462 followed by RC/2014/2002);
- Westwater (P/2006/1989 followed by: RC2014/2001);
- Castle Quays 2 (RP/2011/1101 followed by RC/2015/1335);
- Bellozanne Sewage Treatment Works (P/2017/0309);
- Jersey Gas Co Site (PP/2016/1414);
- Summerland Factory, Broadcasting House and Thorpe House (PP/2012/0832);
- Westmount Quarry (P/2012/1654 and RP/2016/0538) ;
- BOA site (PP/2015/1538);
- Ann Street Brewery (PP/2016/1882);
- Premier Inn Hotel (P/2014/1497 followed by RP/2015/1264);

- 5-6 Esplanade (P/2013/1144);
- 9 Castle Street (P/2017/1369);
- UBS, 24 Union Street (P/2017/1004); and
- 72, 74, 76 Great Union Road (P/2017/0927).

16.26 Cumulative effects assessment for these developments has been considered on a topic basis where these have been identified as being within the ZOI for these topics. The cumulative effects assessment considers both construction and operation effects together.

16.27 If all of the projects were constructed concurrently this might lead to a noticeable temporary but intense increase in the amount of construction activity over a limited period. However, the most likely scenario assumed for this assessment is that the projects would be constructed in a staggered manner over a period of around 10 years and only a few of the assessed project's construction sites would be 'live' at any point during that time. There would also be a traffic management in place which would address the scheduling of construction programme in relation to other sites.

Air quality

Construction phase

16.28 There is the potential for cumulative effects to arise during the demolition/construction phase where demolition/construction works from cumulative developments occur at the same time. The potential for cumulative effects would be restricted to those cumulative schemes within 350m of the proposed JFH. All sites would be required, through Construction Environmental Management Plans, to implement appropriate levels of mitigation to minimise the impact of dust such that cumulative effects would not be more significant than those for the individual developments.

Operation phase

16.29 Heat and power for the proposed development will be supplied by mains electrical power. There is no operational combustion plant proposed as part of the development, therefore there are no cumulative effects of combustion plant during the operation phase.

16.30 There is the potential for cumulative air quality effects as a result of traffic movements on the local road network arising from a number of developments. Traffic data used to assess the effect of road traffic has included traffic associated with the cumulative developments, as much as practicable. Potential cumulative air quality effects

associated with the proposed JFH have therefore been assessed as part of the main assessment of effects (Chapter 5).

- 16.31 As the assessment of effects during the operational phase is predicted to be not significant in relation to traffic on the local road network associated with both the proposed JFH and 'other developments', no significant cumulative effects are predicted.

Noise

- 16.32 Whilst the cumulative developments identified are reasonably close to the proposed JFH, it is unlikely that the highest noise levels from construction will coincide with that of the hospital development, therefore levels would remain below the 75dB(A) SOAEL and plant would adhere to required criteria. The cumulative effect from construction or operational noise is therefore likely to be not significant.

Biodiversity

- 16.33 The assessment has considered both construction and operation effects together. Due to the urban setting of all of the cumulative developments, very limited biodiversity has been identified on any of the sites considered for cumulative assessment, and in many cases minor benefits have been identified due to the enhanced ecological value being introduced through landscaping works.

Geology, Hydrogeology and Contamination

- 16.34 The assessment has considered both construction and operation effects together. The cumulative developments listed below are within the zone of influence for this topic:
- 16.35 **Summerland Factory PP/2012/0832** – This site is approximately 300m to the north and up hydraulic gradient of the proposed JFH site. Given the distance from the site and the likely size of the basement it is considered unlikely that the development will have any significant cumulative effect.
- 16.36 **Jersey International Finance Centre P/2013/0993** - This development is around 100m to the south of the site. Given the proximity of the two sites there is the potential for cumulative effects from dust and accidental spillages during construction. The development is likely to be supported on piled foundations and therefore there is the potential for cumulative effects on groundwater quality. Assuming that similar mitigation measures are undertaken as are proposed for Future Hospitals Project the residual cumulative effects are considered to be minor.
- 16.37 **Jersey International Finance Centre P/2013/0993** - This development is around 150m to the south of the site. Given the proximity of the site to the proposed JFH there is the potential for cumulative effects from dust and accidental spillages if construction phases align. Both developments are likely to be supported on piled foundations and therefore

there is the potential for cumulative effects on groundwater quality. Assuming that similar mitigation measures are undertaken for the Jersey International Finance Centre as are proposed for Future Hospitals Project the residual cumulative effects are considered to be minor.

Water Resources

- 16.38 The assessment has considered both construction and operation effects together. The impact of cumulative developments on water resources is considered to be neutral. It is anticipated that the future developments will agree their connections to surface water and foul sewers with the SoJ Dfl, and therefore the existing sewers will have capacity.
- 16.39 The planned developments do not appear to include any changes to the sea defences which may impact on the tidal flood risk, therefore they are not considered to have any flooding impact cumulatively with the proposed JFH.
- 16.40 The construction of the new Bellozanne Sewage Treatment Works (P/2017/0309) will ensure that there is sufficient capacity for the foul flows to the existing sewers in terms of cumulative demand.

Heritage

- 16.41 The assessment has considered both construction and operation effects together. The cumulative developments listed below are within the zone of influence for heritage effects:
- 16.42 **27 Esplanade & 3 La Rue Des Mielles P/2011/0647** – This development is approximately 250m south of the proposed JFH site and involves the refurbishment of the historic façade to 27 Esplanade which has been assessed with the heritage assessment¹ as improving the historic setting of the listed structure. When considered in combination with the proposed JFH it is not considered that there will be any cumulative effects on the historic features assessed.
- 16.43 **Public JIFC Car Park P/2013/1209** – No heritage effects were identified within the EIS that was prepared for this development and therefore no cumulative effects are expected with the proposed JFH.
- 16.44 **International Finance Centre** – No heritage effects were identified in relation to this development and therefore there can be no cumulative effects with the proposed JFH.

Waste

¹ 27 Esplanade & 3 La Rue Des Mielles, Heritage Assessment, Beverly Ltd, 2013.

16.45 The assessment has considered both construction and operation effects together. Demolition and excavation waste estimated to arise from the proposed JFH has been included in the assessment. It has not been possible to source or forecast the quantities of demolition or excavation waste for the cumulative developments due to the lack in availability of key project information.

16.46 As a result of the limited data available, only cumulative construction waste forecast to be generated by each of the cumulative developments has been assessed. This includes consideration of the expected recycling, recovery and disposal performance, which has been compared against the waste infrastructure available in Jersey. The data that has been used for this assessment is set out in Appendix M-1 along with the assumptions and limitations.

Off-site Recycling capacity

16.47 Cumulative construction waste requiring off-site recycling would produce a severe effect on the recycling capacity in Jersey: 18.7% in 2019 and 15.1% in 2022, which represents a significant proportion of the available recycling capacity in Jersey. However, it is considered that this effect can be mitigated due to the temporary nature of the demolition and excavation waste generated by the proposed development.

Off-site Recovery capacity

16.48 Cumulative construction waste requiring off-site recovery would produce a major effect on the recovery capacity in Jersey: 6.6% in 2022, which represents a significant proportion of the recovery capacity in Jersey. However, this effect can be mitigated due to the temporary nature of the demolition waste generated by the proposed JFH and the availability of capacity at the EfW recovery facility.

Off-site Disposal capacity

16.49 Cumulative construction waste requiring off-site disposal would result in a moderate effect on the disposal capacity in Jersey: 3.5%, which represents a significant proportion of the disposal capacity in Jersey.

Overall waste management capacity

16.50 Overall, cumulative construction waste is considered to result in a more significant adverse effect than the proposed JFH alone. Early contact with waste management contractors and facilities will need to be made to notify them of the potential quantities and timings of potential construction waste generated from each of the Cumulative developments (including the proposed JFH) to ensure they can plan and manage the waste appropriately.

Wind

16.51 All the projects listed in Table 16.5 lie outside the ZOI and are not expected to give rise to any cumulative effects for both construction and operation.

Socio-economics

16.52 At this stage of the project, it is considered that all projects listed as having potential cumulative effects in Table 16.5 have the potential to give rise to some level of cumulative socio-economic effects.

Construction phase

16.53 Although detailed construction programme information is not available for the majority of the proposed projects, this assessment is based on the assumption that, given the programme for the proposed JFH, a number of the projects will be delivered during the hospital construction programme.

16.54 Should projects be delivered along the same construction programme, the following potential cumulative effects may emerge:

- Amenity effects – there is potential for cumulative amenity effects for residents and sensitive businesses where construction traffic and activities occur at the same time, magnifying effects associated with disturbance and access.
- Construction workforce – there is potential for a small amount of displacement from local projects with the hospital attracting local workers who may otherwise be committed elsewhere. This could bring some slight impacts on resourcing other projects. However, it has been assumed that the majority of staff on the

main hospital will be off-island workers and therefore the potential displacement effects will be significantly reduced.

- Construction materials / supplies – there is potential for cumulative effects in relation to demands placed on the supply of materials and services should projects proceed at the same time. This could bring potential positive cumulative effects in relation to supporting local suppliers and providing opportunities for growth within the supply chain (e.g. materials, haulage, construction machinery and site security). However, should demand exceed supply it could lead to potential negative cumulative effects with the local supply chain not benefiting fully from the planned developments in the same way that they would if programmes were staggered.
- Indirect workforce effects – there are a number of potential positive cumulative effects associated within increased spend in the local economy from the construction workforce. This is likely to affect local service providers (cafes, restaurants and hotels), convenience retails and leisure businesses.
- Demands on accommodation – the future hospital is likely to bring increased demand on accommodation providers due to the anticipated levels of off-island workers. It is assumed that the majority of other projects listed in Table 5 will primarily utilise on-island construction companies and workforce. The potential cumulative effects on accommodation demand are therefore likely to be limited.

Operation phase

16.55 During operation of the proposed hospital, it is not anticipated that there will be any cumulative socio-economic effects over and above the baseline situation. This reflects the proposal replacing the existing facility and replicating services that currently exist on the site.

Townscape and Visual Impact

16.56 The full cumulative TVIA is set out in Appendix M-2; the conclusions of that assessment are below and split into Townscape and Visual cumulative effects.

Townscape

Construction phase

16.57 The main sources of cumulative effects on townscape will be the combined impact of demolitions and visual intrusion into streetscapes (by hoardings, traffic etc) and longer-distance views (by taller plant such as tower cranes). The implications for the receptors which the main assessment predicts would be significantly affected are as follows:

- The Parade and Esplanade Character Area: No change from Substantial Adverse, since the cumulative schemes are located close to its southern perimeter and are of demonstrably smaller scale than the JFH;
- Elizabeth Castle: Potential for the effect on its setting to increase from Moderate to Moderate to Substantial Adverse, due to the clustering of tower cranes, particularly within the New Waterfront character area;
- Listed and Unlisted Hospital Buildings: No change from Substantial and Very Substantial Adverse respectively, due to the degree of separation from the cumulative schemes;
- Opera House: No change from Substantial Adverse, although the nearest cumulative scheme (JIFC Building 1) may intrude into its setting);
- Parade Gardens: No change from Substantial Adverse, due to its distance from the cumulative schemes; and
- Victoria Park: No change from Substantial Adverse, for the same reason.

16.58 Construction of the cumulative schemes is not anticipated to increase the predicted effects on other townscape receptors sufficiently to make them significant. However, some of the schemes are likely to give rise to notable effects in their own right; of particular relevance in this respect is Westmount Quarry, due to its prominent location, and the cluster of developments within the New Waterfront character area (although this area is considered to be of very low sensitivity).

Operational phase

16.59 The principal impact of the cumulative schemes once completed will be to introduce new buildings into the townscape, either onto open sites (mainly to the south of The Esplanade) or to replace existing development. In both cases, these buildings will typically be of larger scale than the traditional built fabric, but consistent with development trends in recent years (particularly along The Esplanade and the New Waterfront).

16.60 The overall effect of this change will be to create a townscape that is more resilient to ongoing development, due to its enhanced scale and the greater influence of modern architecture. At the same time, the visual contrast with vernacular buildings and smaller-scale streetscapes will increase.

16.61 The implications for the receptors which the main assessment predicts would be significantly affected are as follows:

- The Parade and Esplanade Character Area: No change from Moderate to Substantial Neutral, since the cumulative schemes are located close to its southern perimeter and are of demonstrably less influential than the JFH development;
- Elizabeth Castle: Potential for the effect on its setting to increase from Moderate to Substantial Neutral to Moderate to Substantial Adverse, due to the introduction of more development of substantial scale within the waterfront setting of this landmark;
- Listed and Unlisted Hospital Buildings: No change from Moderate Beneficial, due to their degree of separation from the cumulative schemes;
- Opera House: No change from Moderate to Substantial Neutral; although the nearest cumulative scheme (JIFC Building 1) may intrude into its setting, it will not affect the key views towards its street frontage;
- Parade Gardens: No change from Moderate to Substantial Beneficial, since the cumulative schemes are well removed from this space; and
- Victoria Park: No change from Moderate Neutral, for the same reason.

16.62 The cumulative schemes are not anticipated to increase the predicted effects on other townscape receptors sufficiently to make them significant. However, some of the schemes are likely to give rise to notable effects in their own right; of particular relevance in this respect is Westmount Quarry (due to its prominent location), the developments along The Esplanade and within the New Waterfront character area (although this is considered to be of very low sensitivity).

Visual

Construction phase

16.63 The implications for the receptors which the main assessment predicts would be significantly affected are as follows:

- Residents in Gloucester Street, The Parade, Elizabeth Place and Cheapside: No change from Substantial Adverse, since the cumulative schemes are either unlikely to be visible or would be seen at some distance;
- Residents in Savile Street and Rouge Bouillon: No change from Substantial Adverse; although construction of the Summerland Factory scheme may affect some of the same receptors, it would not be seen in the same field of view as construction of the JFH;

- Residents in St John's Road/Westmount Road: Potential change from Moderate to Substantial Adverse to Substantial Adverse, if construction of the Summerland Factory scheme is seen in the same field of view as JFH;
- Kensington Place: No change from Substantial to Very Substantial Adverse, since the cumulative schemes are unlikely to be visible; and
- Newgate Street: No change from Very Substantial Adverse, for the same reason.

16.64 Construction of the cumulative schemes is not anticipated to increase the predicted effects on other visual receptors sufficiently to make them significant. However, some of the schemes are likely to give rise to notable effects in their own right; of particular relevance in this respect is Summerland Factory, due to the likelihood that it will be overlooked from surrounding residential streets, and the cluster of developments within the New Waterfront character area, due to the sensitivity of views from locations such as Elizabeth Castle.

Operational phase

16.65 Once complete, the cumulative schemes will introduce new buildings into a range of views, as well as new receptors, some of whom may experience views of the JFH development. Where new buildings occupy sites that are currently open, existing views may be obstructed.

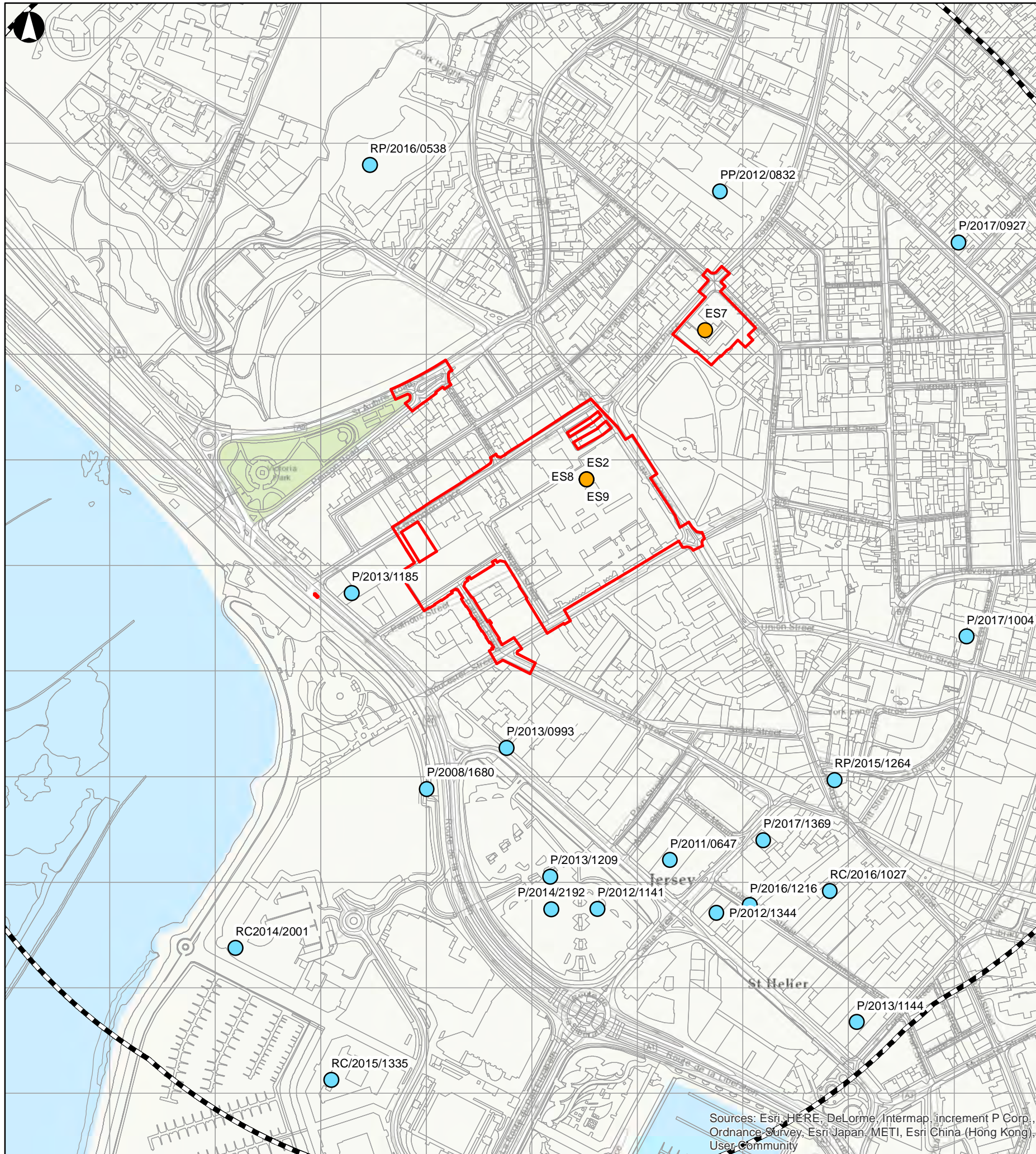
16.66 As the analysis above indicates, the visual influence of the cumulative schemes embedded within the built-up area is likely to be confined to the surrounding streets, although taller buildings may well appear as skyline features (e.g. in views from Fort Regent). However, the visual influence of schemes located on the edge of the built-up area (e.g. within the New waterfront), or in elevated positions (e.g. Westmount Quarry), will be more extensive.

16.67 The implications for the receptors which the main assessment predicts would be significantly affected are as follows:

- Residents in Gloucester Street: No change from Substantial Neutral, since the cumulative schemes are unlikely to be visible;
- Residents in Savile Street and Rouge Bouillon: No change from Moderate to Substantial Adverse; although dual-aspect properties may also experience views of the Summerland Factory scheme, it would not be seen in the same field of view as the JFH;
- Residents in The Parade, Elizabeth Place and Cheapside: No change from Substantial Beneficial, since the cumulative schemes are unlikely to be visible;

- Residents in St John's Road/Westmount Road: Potential change from Moderate to Substantial Neutral to Moderate to Substantial Adverse, if the Summerland Factory scheme is prominent within the same field of view as the JFH;
- Kensington Place: No change from Substantial to Very Substantial Adverse, since the cumulative schemes are unlikely to be visible;
- Newgate Street: No change from Very Substantial Adverse, for the same reason; and
- Users of Parade Gardens: No change from Moderate to Substantial Beneficial, since the cumulative schemes are unlikely to be visible.

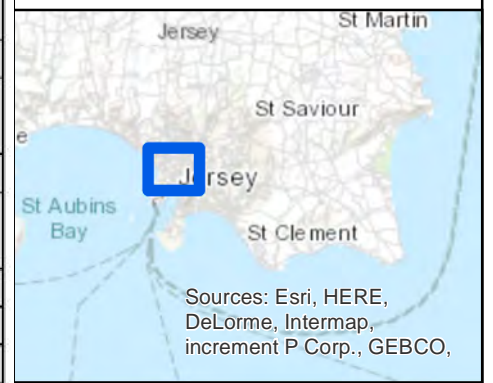
16.68 The cumulative schemes are not anticipated to increase the predicted effects on other visual receptors sufficiently to make them significant, or to downgrade any significant effects (by obstructing views). However, some of the schemes are likely to give rise to notable effects in their own right; of particular relevance in this respect are the developments along The Esplanade (which will give rise to a sequence of effects for users of this thoroughfare) and within the New Waterfront character area (which will affect views from Elizabeth Castle and from the promenade to the west).



Cumulative Site	Development
P/2008/1680	Zephyrus
P/2011/0647	27 Esplanade & 3
	Jersey International Finance
P/2012/1141	Centre – Building 4
P/2012/1344	22/23 Esplanade
	Jersey International Finance
P/2013/0993	Centre - Building 1
P/2013/1185	Gaspe House
P/2013/1209	Public car-park JIFC
	Jersey International Finance
P/2014/2192	Centre - Building 5
P/2016/1216	35 Commercial Street
	Bellozanne Sewage Treatment
P/2017/0309	Works
P/2017/0414	Sunnyside gardens
	Metals recycling facility, La
P/2017/0580	Collette
P/2013/1144	5-6 Esplanade
P/2017/1369	9 Castle Street
P/2017/1004	UBS, 24 Union Street
P/2017/0927	72, 74, 76 Union Road
	Summerland Factory, Broadcasting
PP/2012/0832	House and Thorpe House
PP/2015/0747	La Collette Flats
PP/2015/1538	BOA site
PP/2016/1414	Jersey Gas Co Site
PP/2016/1882	Ann Street Brewery
RC/2015/1335	Castle Quays 2
RC/2016/1027	J1 Esplanade
RC2014/2001	Westwater
RP/2015/1264	Premier Inn Hotel
RP/2016/0538	Westmount Quarry

Legend

- CumulativeSitesXYAF
- EnablingSchemes
- 500m Study Area from Site Boundary
- Site Boundary



P01.3	2018-04-05	MJ	RE	PT
Issue	Date	By	Chkd	Appd

Metres

ARUP

Client
Department for Infrastructure

Job Title
Jersey Future Hospital

Cumulative Developments within 400m of the Site Boundary

Scale at A3
1:4,000 **INSET: 1:300,000**

Job No 237035	Drawing Status For Issue
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Drawing No
Figure 16.1

Issue
P01.3

Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO; USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community